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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VINCENT, SEAN E

ART UNIT PAPER NUMBER

1731

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,742

Applicant(s)

ZANDVLIET ET AL.

Examiner

Sean E. Vincent

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 44-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/380,240.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-43, drawn to methods of manufacturing spherical glass articles.

Group II, claim(s) 44-47, drawn to a device for manufacturing glass articles.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the only technical feature they have in common is a half mold which was taught by Hollister.
3. During a telephone conversation with Richard Byrne on December 7, 2004 a provisional election was made with traverse to prosecute the invention of group I, claims 1-43. Affirmation of this election must be made by applicant in replying to this Office action. Claims 44-47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

5. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:
6. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).
7. The following features in the present claims were not supported by the disclosure of this application or the parent application:
 - a. Two parts of a glass flow obtained simultaneously
 - b. Two molten glass flows between which the figurine is enclosed
 - c. Cooling of the spherical article at a chosen speed
 - d. Pressing a heated figurine into the glass after introducing the glass to a mold cavity
 - e. The figurine temperature being higher than that of the glass
 - f. The figurine temperature being between 100°C and 1200°C
 - g. The figurine temperature being 1150°C
 - h. Bottom molds provided with holes
 - i. First, second and third bottom molds

- j. A free space provided in the glass at the location where the figurine is to be inserted
- k. Tumbler and bead fine grinding machines/bead calibrating machines
- l. Polishing the cooled objects
- m. Annealing periods of three or six hours.

Specification

8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The features “a” to “m” above are not supported by the specification.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The features “a” to “m” above are not supported by the specification.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1731

12. Claims 6-12, 16, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claim 6 and 7 are indefinite because they appear to contradict claims 1 and 5. Claim 7's tubular flow is one part, not two. Claim 6's "flow of at least two differently directed parts" was not two continuous flows.

14. Claim 16 recites the limitation "again fully heating" in line 2. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 20 recites the limitation "the discharge opening" in line 1. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 21 recites the limitation "the mandrel" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1 and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Dominitz et al. Dominitz et al taught methods of making glass spheres containing enameled porcelain objects wherein figurines were dropped into a molten glass stream, the stream was cut

between the figurines into gobs and the glass gobs were rolled between lead screws and on a free rolling guide (see col. 1, line 60 to col. 3, lines 14, col. 4, lines 18-45 and col. 5, lines 39-49).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claim 25 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hollister, Jr. The products disclosed by Hollister, Jr on page 256 appear to be identical to the claimed product.

22. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dominitz et al. in view of Ferngren (either patent). Dominitz et al did not teach that its scissors had V-shaped cutting edges. It would have been obvious to a person of ordinary skill in the art at the time the

Art Unit: 1731

invention was made to use V-shaped cutting edge scissors in Dominitz et al because such shapes were very well known in glass gob cutting, as shown by the figures of the Fergren patents.

23. Claims 1-5, 13-17, 22-24, 26, 30, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollister, Jr. in view of Dominitz et al (US 5895512).

24. Hollister, Jr. teaches methods of manufacturing glass articles by providing a mass of molten glass, carrying the glass to the mold cavity, providing glazed clay figurines, pouring a first portion of glass into a lower mold, placing the figurine in the mold, pouring a second portion of glass onto the first portion, pressing the glass with an upper mold, and "baking" (see page 255, line 18 to page 257, the figure). Hollister, Jr. does not teach omnidirectional rolling and cooling. Dominitz et al teaches methods of making glass spheres containing enameled porcelain objects wherein glass gobs are rolled between lead screws and on a free rolling guide (see col. 5, lines 39-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to cool and form the glass spheres of Hollister, Jr. on lead screws and a free rolling guide instead of cooling the spheres in the molds because Dominitz et al teaches that the balls leaving the free rolling guide had a "more or less perfect shape and surface finish".

25. Hollister, Jr. and Dominitz et al do not teach any glass or ceramic composition ranges. Flint glass and china clay mixed with supersilicate of potash are mentioned in Hollister, Jr. . The claimed encapsulating glass is well known in the art as "soda glass". The claimed compositions for the material of the figurines and the glazing appear to be common ceramics. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the claimed compositions because they represent well-known glasses and ceramics.

26. Hollister, Jr. and Dominitz et al do not teach annealing the formed spheres, per se.

Hollister, Jr.'s baking was claimed to "set the crystal". It would have been obvious to a person of ordinary skill in the art at the time the invention was made to anneal the spheres after forming because it would have prevented separation between the ceramic and the glass. While baking times are shorter in Hollister, Jr than applicant's claims, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to extend the baking times to relieve more stress if necessary. The annealing times would have been optimal parameters (see MPEP 2144.05)

27. Hollister, Jr and Dominitz et al do not teach a cooling regimen. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to cool the glass articles slowly to about 50°C because it would have been sufficiently solid at that point and slow cooling would prevent additional stresses due to thermal contraction. The exact cooling rate would have been an optimized parameter (see above).

28. With regard to claim 39, Hollister, Jr and Dominitz et al did not teach having more glass than was needed to form the object, per se. However, in the process practiced by hand in Hollister, Jr, the objects were likely to be of different sizes from one to the next. In that sense, the larger objects contained more glass than needed.

29. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hollister, Jr. and Dominitz et al as applied to claim 1 above, and further in view of Devine (US 3664786).

30. Hollister, Jr. and Dominitz et al do not teach enclosing figurines in molten glass in the absence of a particular gas. Devine teaches glass encapsulating in a vacuum (see figures, col. 1, lines 28-38). It would have been obvious to a person of ordinary skill in the art at the time the

Art Unit: 1731

invention was made to conduct the method of Zandvliet et al in a vacuum because Devine taught that it would have eliminated bubbles in the encapsulant.

Allowable Subject Matter

31. Claims 6-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

32. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or fairly suggest methods of manufacturing glass articles as claimed wherein a tubular glass flow is produced as claimed. As discussed in applicant's arguments, the prior art taught dropping figurines into a molten glass pool within a hollow funnel member and not into a hollow space within a tubular glass flow.

Conclusion

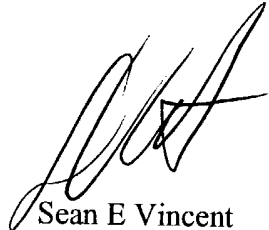
33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The newly cited US patents all clearly illustrate V-shaped glass cutters.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Vincent whose telephone number is (571) 272-1194. The examiner can normally be reached on M - F (8:30 - 6:00).

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sean E Vincent
Primary Examiner
Art Unit 1731

S Vincent
Wednesday, December 08, 2004